

Serial Number 09/783,565

**APPENDIX D**  
**(Marked-Up Copy Of Amended Paragraphs)**

Page 2, line 20 to Page 3, line 9:

According to this invention, a novel piezoelectrically actuated electronic device of this invention comprises a substrate, a support and a first electrode provided on said support and a second electrode provided on said substrate or another substrate. The support comprises a center portion and at least two elastic and symmetric arms, at least two piezoelectric films positioned on respective arms of said support, and upper [electrode] and lower [electrode] electrodes for said piezoelectric films. The piezoelectric films are adhered firmly to the corresponding positions on the arms, relative to the center portion of said support, whereby extensions of the piezoelectric films will cause curving of said arms. By providing a voltage to said piezoelectric films, the length of the piezoelectric films will extend, such that the distance between said first electrode on said support and said second electrode on said substrate or another substrate may be changed.

Page 3, lines 10-18:

When the purpose of [change of] changing the distance between said first electrode and said second electrode is to control the contact between said electrode and said second electrode is to control the contact between said electrode and said second electrode, the piezoelectrically actuated electronic device functions as a microswitch. When the purpose [change of] changing the distance between said first electrode and said second electrode is to control the distance between said first electrode and said second electrode, the piezoelectrically actuated electronic device functions as a tunable capacitor. Since the arms of the support are in a symmetric manner, the corresponding surfaces of the first electrode and the second electrode may be maintained substantially parallel.

Page 4, line 11 to Page 5, line 3:

Fig. 1 illustrates the cross-sectional view of an embodiment of the piezoelectrically actuated electronic device of this invention. As shown in this figure, the piezoelectrically

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actuated electronic device of this invention comprises a substrate 100 to contain the piezoelectrically actuated electronic device and a support 101. The support 101 may be made of a strip of elastic material and comprises a central portion and two elastic arms 101a and 101b. Both ends of the support 101 are firmly positioned in the substrate 100, with [its] a central portion of support 101 being [distanced to said] spaced from substrate 100 [at] by a predetermined distance. [On] Firmly adhered on the arms 101a and 101b of the support 101[, firmly adhered] are two piezoelectric films 103 and 103 at the corresponding position substantially symmetric to the central portion of the support 101. In this embodiment, the piezoelectric films 103 and 103 are upper electrodes and lower electrodes (not shown) of the piezoelectric films 103,103. The upper and lower electrodes of the piezoelectric films 103, 103 are supplied [powers] with power by a power supply (not shown) and the power supplied to said upper and lower electrodes [are] is controlled by a controller 105.

Page 6, lines 16-23:

In the preparation of the piezoelectrically actuated electronic device of this invention, the support 101 may be prepared with a semi-insulator and/or insulation material under the micro fabrication technology or under the surface micromachining technology. The actuator of the tunable electronic device is the piezoelectric films 103, 103. In application, the films may contain one or [tow] two layers of piezoelectric material. If more than two layers are used, each layer may contain its respective upper electrode and lower electrode. Applicable piezoelectric material includes ZnO, AlN, PZT or other piezoelectric materials.

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**APPENDIX E**  
**(Clean Copy of Amended Abstract)**

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A piezoelectrically actuated electronic device includes a substrate, a support, a first electrode provided on the support and a second electrode provided on substrate. The support includes a center portion and at least two elastic and symmetric arms. At least two piezoelectric films are positioned on respective arms of the support and the upper and lower electrodes for the piezoelectric films. The piezoelectric films are adhered firmly to the corresponding positions on the arms, relative to the center portion of said support, whereby extensions of the piezoelectric films will cause curving of the arms. By providing a voltage to the piezoelectric films, the length of the piezoelectric films will extend, such that the distance between the first electrode on the support and the second electrode on said substrate may be changed.